**Amendments to the Claims**

This listing of claims will replace all prior versions, or listings, or claims in the application.

**Listing of Claims**:

1. (currently amended) A method of energizing a plasma antenna using power from the discharge of an ~~electopropulsion~~ electropropulsion engine comprising the steps of:

providing a solid bar of ~~Teflon~~ polytetrafluoroethene;

contacting an electrode with said solid bar of ~~Teflon~~ polytetrafluoroethene;

charging a capacitor using a power processing unit;

firing a spark ignitor to create an initial conducting path for a primary discharge.

discharging electromagnetic particles ~~initiatied~~ initiated by pulse forming circuitry;

releasing energy from said capacitor across said electrode gap;

ablating several layers of said ~~Teflon~~ polytetrafluoroethene bar, said ablation products ionizing and accelerating by an electromagnetic Lorenz force, thereby generating a pulse.

2. (original) The method of energizing a plasma antenna claim 1 wherein said releasing step further comprises releasing energy from said capacitor in the amount of tens of Joules.

3. (currently amended) The method of energizing a plasma antenna of claim 2 wherein said releasing step further comprises releasing energy from said capacitor in ~~am~~ an amount of tens of Joules over a time scale of several microseconds.

4. (original) The method of energizing a plasma antenna of claim 1 wherein said charging step further comprises charging a capacitor using power from an aerospace platform.

5. (currently amended) The method of energizing a plasma antenna of claim 1 wherein said ablating step further comprises ablating several layers of said ~~Teflon~~ polytetrafluoroethene bar, said ablation products ionizing and accelerating by an electromagnetic Lorenz force to a velocity of 10-20 km/sec.

6. (currently amended) The method of energizing a plasma antenna of claim 1 wherein said ablating step further comprises ablating several layers of said ~~Teflon~~ polytetrafluoroethene bar, said ablation products including a variety of molecular fluorocarbons, ionizing and accelerating by an electromagnetic Lorenz force, thereby generating a pulse.

7. (currently amended) The method of energizing a plasma antenna of claim 1 wherein said ablating step further comprises ablating several layers of said ~~Teflon~~ polytetrafluoroethene bar, said ablation products ionizing and accelerating by an electromagnetic Lorenz force, thereby generating a pulse of short duration.

8. (original) A plasma antenna system comprising:

a propellant and feed system;

a capacitor charging power processing unit;

an energy storage capacitor, wherein said energy is released over an electrode gap and resultant ablation products are ionized and accelerated by an electromagnetic force, thereby producing a pulse.

9. (currently amended) The plasma antenna system of claim 8 wherein said propellant and feed system is a compact solid bar of ~~Teflon~~ polytetrafluoroethene and a negator spring.

10. (original) The plasma antenna system of claim 8 wherein said capacitor charging power processing unit uses power from an aerospace platform.

11. (original) The plasma antenna system of claim 8 wherein said plasma antenna is a directional modulation plasma antenna.

12. (original) The plasma antenna system of claim 8 further comprising a spark ignitor for creating an initial conducting path for primary discharge.